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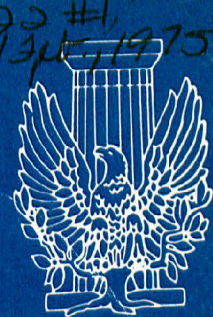
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January
February 1975

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North Carolina Chapter of
The American Institute of Architects

NC Architect



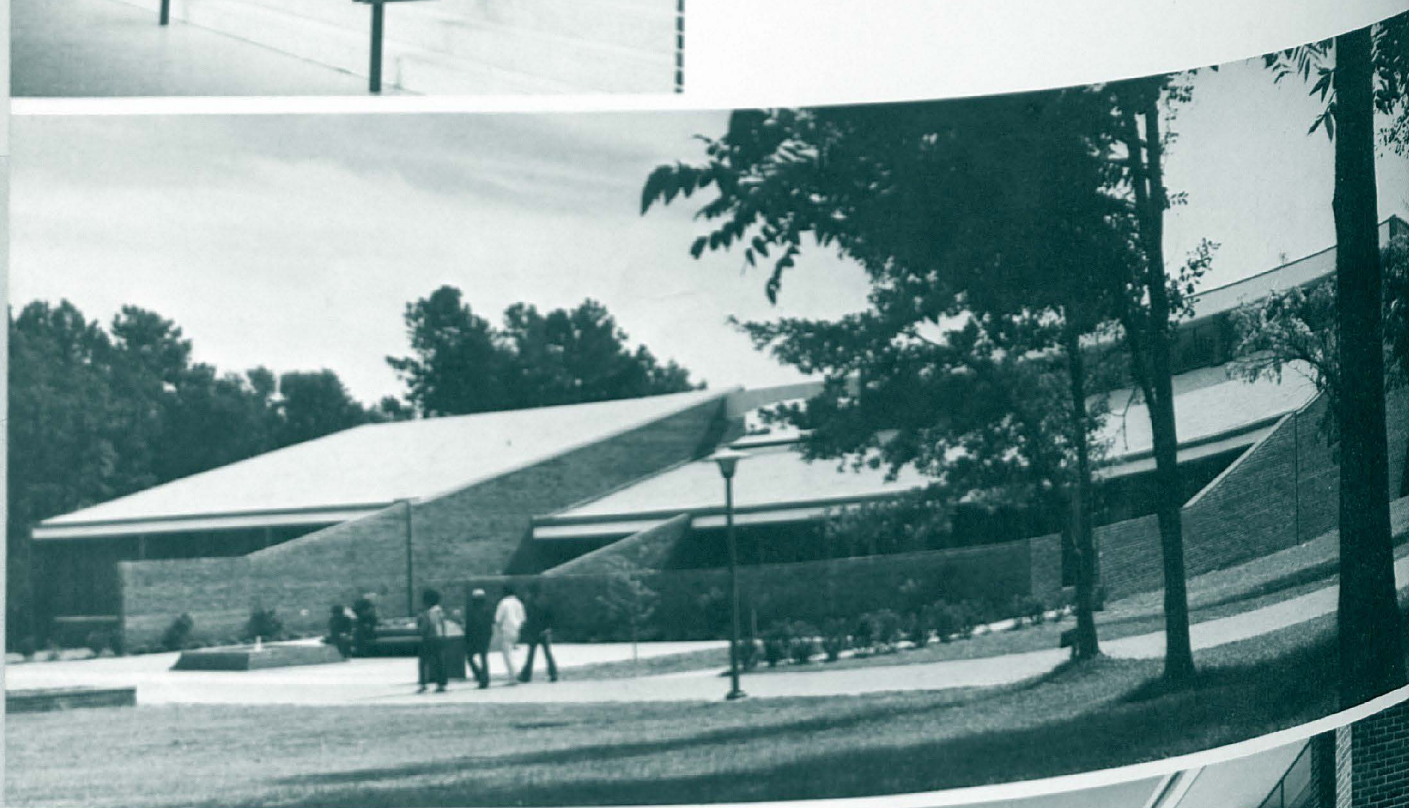
This
Business
of
Architecture

NCAIA Winter Convention February 13-15 1975



Ageless Architecture through Brick Beauty

Rudolph Jones Student Center
Fayetteville State University
Fayetteville, N. C.



Architects:
MacMillan, MacMillan, Shawcroft & Thames
Partner in Charge: Brian Shawcroft

Structural Engineer:
David Hill

General Contractor:
D. R. Allen & Son, Inc.



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Jackson, Miller and Associates, Architects and Engineers

John F. Chick, Contractor

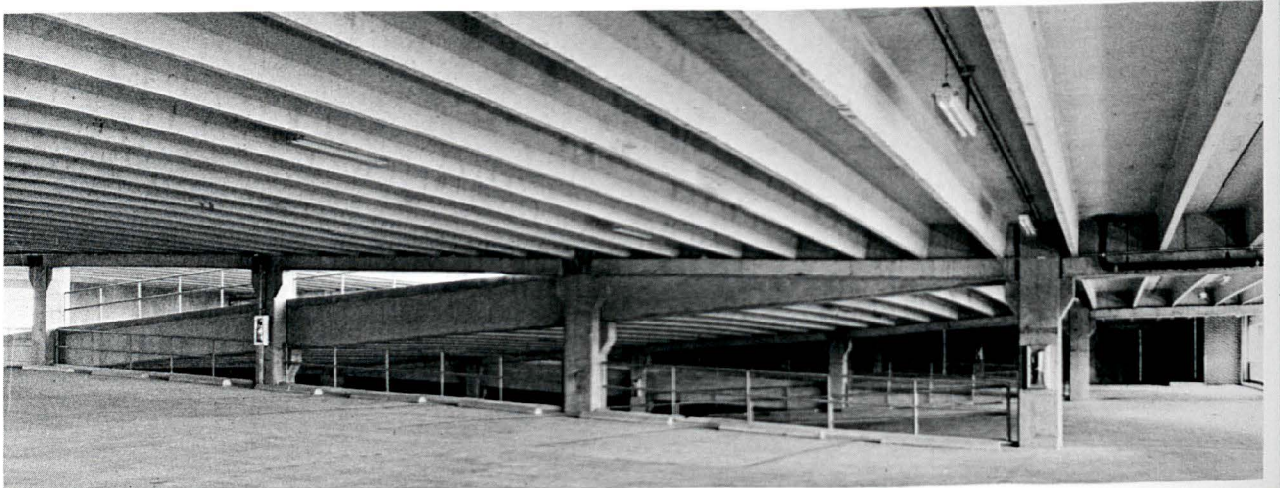
Who says parking buildings are ugly. Not this one.

It's the new parking structure for South Carolina Baptist Hospital in downtown Columbia. The six levels of parking decks utilize a structural system of 63-ft. clear span pre-stressed concrete double tees, supported by precast beams and columns. All components of this system were manufactured, delivered and erected by Tindall. The 180,000 sq. ft. deck is continuously sloped for parking as well as two way level-to-level access with no tight turns. The facility parks 500 cars and has provision for four passenger elevators. These elevators also serve the four-story Professional Building which fronts the parking structure and is connected to the hospital by a crosswalk over Taylor Street. The building is topped with a heliport.

Economy, speed of erection, low maintenance cost, and fire safety are some of the reasons the Tindall precast/prestressed concrete structural system was chosen. The result is a functionally beautiful building that will give substantial service for many years to come.



P.O. BOX 1778/SPARTANBURG, SOUTH CAROLINA 29301



January
February 1975

Published by the
North Carolina Chapter of
The American Institute of Architects



E. H. Copeland, AIA

Jack D. Train, FAIA

S. Scott Ferebee, Jr., FAIA

G. Neil Harper

Charles C. Dixon, Jr., AIA

This Business of Architecture

Overview

Know Your Costs

Budgeting Your Costs

Controlling Costs with the AIA Financial Management System

Introduction

Ferebee, Walters & Assocs.

Leslie N. Boney, Architect

F. Carter Williams, Architects

Odell Associates Inc.

Professional Design Partnership

J. Hyatt Hammond Associates

J. N. Pease Associates

Haskins & Rice, Architects

Fred W. Butner, Jr., Associates

The Freeman-White Associates, Inc.

J. Bertram King, FAIA, Architects

Chapter Honors General Assembly

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This Business of Architecture

NCAIA Winter Convention February 13-15 1975



THIS BUSINESS OF ARCHITECTURE

Overview

by E. H. Copeland, AIA, 1974 Chairman
NCAIA Office Practice—Fees and Contracts Committee

The theme of our annual meeting is "This Business of Architecture." Our theme was chosen in mid-year of 1974, in expectation that difficult economic times lay ahead. It was also to recognize the significant changes in architectural practice stimulated by increased emphasis on design-build programs, fast-track construction techniques and the lack of any uniform compensation schedules.

In past years, recommended minimum fee schedules within the AIA components established minimum levels of compensation for relatively standard services on all building types. As these schedules were discontinued, and as practitioners began to modify their services more in keeping with the specific needs of an Owner, the need for more comprehensive internal cost control became quite apparent. New services, such as construction management, life-cycle cost analysis, energy conservation studies, and systems building components, require new systems of compensation. As these services, and our buildings are custom designed, so must our compensation be similarly tailored. Our theme this month includes the titles:

"Know Your Costs" "Budget Your Costs" "Control Your Costs" "Compensation"

Our guest speakers and panelists are nationally recognized for their expertise in these subjects. In addition to the experience related by these speakers from their background of work with architectural practitioners nationwide, there is a wealth of experience available within the practitioners in our own North Carolina Chapter. Our convention program is designed to stimulate discussions by all the conference participants who represent small and large offices across the state.

A word of thanks to those faithful members of the Office Practice Fees and Contracts Committee with whom it has been my privilege to serve. The many hours spent in preparing, distributing and analyzing the 1972 survey provided a great deal of background into the experience of firms across the state. Based on that data, significant patterns in office cost trends and profitabilities were established. While the increased costs of practice were partially off-set by higher compensation during the record escalation of construction costs during 1974, the needs for different types and better compensation methods were clearly evident.

As we all look forward to stabilization of the cost of construction for our clients, we also look forward to a period of dramatic growth in the quality of services we can offer, and to adequate returns for our professional efforts. When these goals are achieved, we can anticipate true custom designed services to all of our clients, and the retention of well-trained staffs and the practice of sound business techniques within every office.

NCAIA Chapter 1975 Winter Convention at Winston-Salem, N.C.
February 13-15, 1975

KNOW YOUR COSTS

by Jack D. Train, FAIA

In noting that the theme of this Convention is "This Business of Architecture," it is significant that the term "business" is now being used in connection with the practice of architecture. For the past twenty years, I have been arguing that architecture is not only a profession, it is a business as well. If we are to do truly progressive and creative architecture with any consistency, it is necessary that we make each of our projects pay its own way.

The economic aspects of our practice are the most neglected items in our educational training both in the schools and in our apprentice practice. This is further borne out by the fact that the majority of architects attempting to establish their own practice fail on their first attempt because of failure to recognize proper contractual procedures, overhead costs, and direct costs other than technical labor.

In a profession that prides itself on the logic with which it approaches and solves a client's problem, we are indeed a remarkable species in that we approach our own problems with such little logic.

In this day of enlightened architecture, we criticize our associates when they blindly mimic structures of the past; yet nine out of ten architects, when asked to establish their fee on a project, blindly quote some "magic percent" without relating it in any way to the work to be performed. The origin of establishing an architect's fee as a percent of the building construction cost was sound. However, its present-day usage, without recognizing an infinite number of exceptions, is completely ridiculous.

In the latter part of the nineteenth century and the early part of this century, the majority of all architectural services were performed in connection with residences. The possibility for variety in industrial, commercial, and educational buildings was reasonably limited.

Structural systems were almost uniform prior to the general usage of structural steel and reinforced concrete. Heating, plumbing, and electrical systems were either non-existent or in accordance with some manufacturer's standard installation. Building costs were far more uniform and predictable than today's fluctuating market permits.

By relating his fee to the construction costs of a building, our predecessor architect was able to obtain a reasonable reimbursement for his services without creating an argument with his client when the fulfillment of his client's expanding desires in the building exceeded its initial description.

Today with the infinite variety of building materials, structural systems and air conditioning systems at our disposal, it is a challenge to the architect's ingenuity to fulfill the client's requirements with the lowest possible construction cost. There isn't an architect anywhere who will deny his ability to reduce the building costs by careful design and engineering. In other words, by spending more time and effort (i.e., increasing his own costs), the architect can actually reduce the building costs. Thus, if he has a fee that is related to the building costs, by spending more money, he can reduce his income.

After many futile efforts to convince other architects that percentage fees were an unbusinesslike way of charging for their services, it became apparent that a change could never be effected until they understood and felt confident with another approach. With the aid and support of the National AIA, a series of programs has been carried out since 1966, all of which have been directed toward making the practicing architect aware of his costs. The first program was a study commissioned to Case and Company, which conducted a national survey of architectural costs and in 1968 published its findings in an AIA publication entitled "Economics of Architectural Practice." Although it

came as no great surprise, the survey showed an appalling variety of inept cost records and general ignorance of operating costs in architectural offices throughout the country. In 1969, Case and Company developed an AIA document entitled "Methods of Compensation for Architectural Services" and visited AIA chapters all across the country, conducting seminars aimed at teaching architects an intelligent approach to charging for their services. Although these two efforts made architects more aware of their economic shortcomings, they did very little to improve the situation. The problem was that architects still didn't have a unified way of determining their costs; and without cost knowledge, they would never be able to establish reasonable rates of compensation or measure economic performance.

As the first step in helping offices to know their own costs, the AIA commissioned a national public accounting firm, Arthur Andersen and Company, to prepare an accounting manual that would be customized for architectural offices. The result was a 1970 publication entitled "Financial Management for Architectural Firms," which presents new techniques and procedures for overall firm management with examples of forms and reports. Although adherence to the procedures outlined by Arthur Andersen and Company does provide all needed cost information, the bookkeeping staff in many offices is unable to produce the important summary reports in time for them to be the useful management tool they are capable of being. As a result, one final AIA program was completed in 1971 when Dr. Neil Harper (at that time with CLM Systems Inc.) converted the Arthur Andersen Financial Management System into a computerized program. This system now produces, in a timely fashion, all of the cost information that an architectural firm needs to know in order to budget and control its cost for a profitable operation.

Since part of my assignment here is to define costs, indirect costs and overhead and profit, I would like to start out by stating some very simple equations:

1. When seeking to establish your compensation with a client:

$$\text{Compensation} = \text{Target Profit} + \text{Budgeted Costs}$$

2. After establishing the compensation and signing the contract:

$$\text{Actual Profit} = \text{Compensation} - \text{Actual Costs}$$

These formulas may be sufficient to define profit, at least until the discussion period. However, costs can stand some additional discussion. Here we have a third formula:

$$\text{Total Costs} = \text{Direct Cost} + \text{Indirect Costs}$$

Direct costs should comprise all possible costs that can be specifically identified as resulting from a particular project and thus should be charged against the project. With few exceptions, the largest segment of the direct cost on a project results from job labor. Good accounting would include in job labor all specification and report typing related to the project. Job labor would also include promotional and administrative time (such as meetings, contract negotiations and reviews) that is identifiable as project related, whether performed by a principal or by an employee of the firm. A good accounting system would break down these job labor costs into the amount spent on the various job-related tasks. Traditionally, this has been in the form of management, design, architectural detailing, specification writing, shop drawing checking, field observation, etc. In many offices these tasks are further broken down by phases of service such as design, working drawings and construction. When these cost records are accurately kept and compared with the history of other similar projects, the architect begins to understand and know the basis for a large segment of his costs.

In addition to job labor, all offices incur other direct costs that can be specifically identified with a given project. These costs include consultant and engineering costs, when performed outside of the office; long distance telephone costs; travel costs; specific client entertainment; printing costs of drawings, specs and reports; photographs; renderings; models; tracing media used on a project; and computer time. Because many of the items accounting for these other direct costs are subject to special client requirements, many of these costs have been written into architectural contracts as reimbursables. Nevertheless, they are still direct costs and must be identified and isolated.

The big mystery to architects has always been indirect costs, otherwise known as "overhead." Indirect costs are all costs incurred by an architectural office that cannot be specifically identified with any particular project and thus must be borne in some equitable share by all projects. Our office maintains records on some thirty-nine items that we consider in this category of costs. Without listing each item, they tend to fall into some subcategories: 1) Indirect Labor, including secretarial, general administrative, other non-productive labor such as AIA activities, vacation, holiday and sick leave time; 2) Employee Benefits such as group insurance, FICA, unemployment tax and retirement fund; 3) General Operating Expenses such as rent and lights, supplies, licenses, tel and tel, postage, insurance, depreciation and amortization; 4) Promotion; 5) Legal and Accounting; 6) Miscellaneous, including bad debts and interest on borrowed money.

Of all the costs an architect must deal with, the indirect costs have increased at the most rapid rate. We distribute these costs against each project in proportion to the technical labor we have expended on the project. Fifteen or twenty years ago, these indirect

costs varied between sixty and eighty percent of the technical labor costs in our type of practice. Today, they are well over one hundred percent of the technical labor costs and are climbing with each increase in the FICA, errors and omissions insurance, head tax by the AIA, and surtax by the government. Not all of the indirect costs are beyond our control, and any office that keeps track of these costs has a chance to make decisions that will keep them under control.

For those architects doing business with the Federal Government, it is significant to note that all of their lump sum contracts are based on a compensation equal to a stated profit plus a breakdown of anticipated costs. They usually go through a negotiating process of measuring direct costs against the stated scope of work. The negotiating team for the government will accept overhead costs as a percent of technical labor, but they will reserve the right to audit your records in determining this percentage. Usually the audit covers a three-year span and excludes as allowable costs certain items, some of which all offices incur as indirect costs.

1. Commissions and bonuses (under whatever name) in connection with obtaining or negotiating a government contract.
2. Contingency reserves
3. Contributions and donations
4. Dividend payments
5. Entertainment
6. Interest on borrowings

Since the profit allowance by the Federal Government ranges between ten and fifteen percent, each architect must be careful that the total compensation agreement he reaches with the government will indeed cover his actual costs, when the disallowed costs are included, because they are a part of his cost of doing business.

Mr. Train is President of the Chicago architectural firm of Meta, Train, Olson and Youngren.

BUDGETING YOUR PROJECT COSTS

by S. Scott Ferebee, Jr., FAIA

Architectural education takes two forms. First, training in design and theory given by the universities, and second, training in the practical aspects of design and construction obtained during the apprenticeship period of working in an office following graduation. Unfortunately, neither of these gives the young graduate the needed background in the business side of architecture. Although most university curricula offer courses in office practice, and the young graduate serving his apprenticeship is exposed to office organization and project management, in neither instance does he obtain the necessary background in architectural accounting procedures, project cost and time control, estimating fees and budgeting.

As a result, the young architect wishing to open his own office is at a complete loss when it comes to managing financial matters. As a result, components of the American Institute of Architects across the country found it necessary some years ago to establish recommended minimum fee schedules. These schedules served a number of purposes. First, when approved by government agencies, they established uniform fees for government work and placed competition for design services on the basis of qualifications and services, rather than on fee. Second, and probably most important, they served as a guide for young practitioners having no experience or training in that all-important part of practice, the establishment of adequate fees for their work.

It was soon recognized, however, that recommended fee schedules had their problems. Several years ago, Jack Train and others began to point out the weaknesses in this system. First, recommended fee schedules were based on a standard set of services being performed on a typical building of a particular type

in a particular cost range for the average client. As we all know, very few projects fit these circumstances.

Secondly, recommended schedules assumed that all offices performed with the same efficiency and turned out the same quality of work. Again, we know that this is a totally artificial assumption.

The more serious problem, however, was the ethical questions raised by the fact that these recommended schedules were based on a percentage of the construction cost. Since a project exceeding the budget would actually increase the architect's fee, professionals whose jobs ran over the budget were suspect of designing it that way to increase their income. Conversely, if an architect put in extra time and effort in studying the cost and working to bring it under the budget, his fee was reduced. The potential conflict of interest was obvious.

Finally, the U. S. Justice Department began to question the use of recommended minimum fee schedules by the various bar associations across the country on the grounds that they amounted to price fixing as prohibited by the Sherman Anti-Trust Act. It became apparent that the same arguments would be used concerning architectural fees. As a result, the American Institute of Architects in 1972 and 73 firmly urged all of its components to withdraw all recommended minimum fee schedules and to carefully avoid any activities that might suggest the establishment of a minimum fee. I should point out here that this in no way prohibits government agencies and other clients from working with the Chapter to determine an adequate fee schedule and in turn, offering this fee to architects working for the agency.

At this point, we had come full circle. Young practitioners, lacking training and experience in financial management, were again at a loss as to how

to determine adequate fees. But young practitioners were not the only ones suffering. Through the years, many small and medium-sized firms had failed to develop and maintain adequate historical data on completed projects and to learn how to estimate the fees on new ones. Chapter fee schedules had become a crutch, and profit and loss was determined by the amount of money in the bank at the end of the year without relation to which projects had been profitable and which had produced losses.


Foreseeing this problem, AIA has worked diligently since 1966 to develop tools to assist architectural offices of all sizes in maintaining adequate financial management and job cost accounting records. In companion articles to this one, Jack Train and Neil Harper have outlined these in detail. My purpose here is to suggest how the data obtained through use of these tools might be used to budget dollars and time to architectural projects.

Budgeting takes two forms. First, and the simplest, is taking an established fee and allocating it to profit and to the various activities that must be performed in the course of providing professional services on a building project. Second, and the most difficult, is taking a project, estimating the various costs necessary to do the work and coming up with a fee. Once the fee is accepted by the client the estimate becomes the basis for budgeting the work in the office.

In both cases, adequate historical data is a must. Since this is the one thing that the new office lacks, AIA is now spending a considerable sum on the development of a Man Hour Data Bank. Firms across the country will feed information on the number of hours required to perform each phase of architectural and engineering services on specific job types into a central computer storage center where it will be available to sub-

scribers. The system is being tested on the West Coast and its development into a nation-wide tool, free of bugs, cannot be expected for another two or three years.

Figure 1 is the form used by our office in allocating a pre-established fee to the various activities that make up job cost on an architectural project. You will note that we establish the profit



FEREBEE, WALTERS AND ASSOCIATES • ARCHITECTS / ENGINEERS / PLANNERS

BUDGET AND ALLOCATION OF FEES

Project Name XYZ ELEMENTARY SCHOOL

Owner XYZ BOARD OF EDUCATION

Project Number 789.01 Date MAY 1, 1974

Budget for Construction \$ 835,000.00

Basis for Architectural Fee 6.7 %

Estimated Architectural Fee \$ 55,945.00

ALLOCATION OF FEES

Profit	<u>17.0 %</u> of Fee \$ <u>9,511.00</u>
Mechanical Engineering Services	<u>15.0 %</u> of Fee \$ <u>8,392.00</u>
Electrical Engineering Services	<u>7.0 %</u> of Fee \$ <u>3,916.00</u>
Structural Engineering Services	<u>8.0 %</u> of Fee \$ <u>4,476.00</u>
Other Consultants <u>—</u>	<u>— %</u> of Fee \$ <u>—</u>
Direct Expenses (Other than salaries)	<u>3.0 %</u> of Fee \$ <u>1,678.00</u>
Indirect Expenses	<u>25.0 %</u> of Fee \$ <u>13,986.00</u>
Direct Salary Expense	<u>25.0 %</u> of Fee \$ <u>13,986.00</u>

ALLOCATION OF DIRECT SALARY EXPENSE

Project Administration	<u>2.5 %</u> of Fee = <u>1399</u> @ \$ <u>10.00</u> Hr. = <u>140</u> Hours
Master Planning	<u>— %</u> of Fee = <u>—</u> @ \$ <u>—</u> Hr. = <u>—</u> Hours
Programming	<u>— %</u> of Fee = <u>—</u> @ \$ <u>—</u> Hr. = <u>—</u> Hours
Schematics	<u>2.5 %</u> of Fee = <u>1399</u> @ \$ <u>6.50</u> Hr. = <u>215</u> Hours
Design Development	<u>5.0 %</u> of Fee = <u>2797</u> @ \$ <u>6.50</u> Hr. = <u>430</u> Hours
Working Drawings	<u>8.4 %</u> of Fee = <u>4698</u> @ \$ <u>6.00</u> Hr. = <u>783</u> Hours
Specifications	<u>1.6 %</u> of Fee = <u>895</u> @ \$ <u>7.00</u> Hr. = <u>128</u> Hours
Cost Estimating	<u>— %</u> of Fee = <u>—</u> @ \$ <u>—</u> Hr. = <u>—</u> Hours
Const.Admin.-(Field)	<u>2.5 %</u> of Fee = <u>1399</u> @ \$ <u>6.00</u> Hr. = <u>233</u> Hours
Const.Admin.-(Office)	<u>2.5 %</u> of Fee = <u>1399</u> @ \$ <u>6.00</u> Hr. = <u>233</u> Hours

Figure 1

first. There is no certain rule for this, but we vary it from 5 to 20 percent, depending on the size and complexity of the project. We know, for example, that it is impossible to do much more than break even on projects of under \$100,000; and we would be kidding ourselves if we established a profit target of more than 5 percent. By the same token, we know that a project of over \$2,000,000 properly managed can produce a profit of 20 percent.

After subtracting profit, we estimate other direct costs. The largest of these, of course, is engineering services. These, too, will vary with the size, type and complexity of the project, but as a rule of thumb on typical projects, we find that mechanical engineering services amount to about 15 percent of our fee, electrical engineering services 7 percent, and structural engineering services 8 percent, accounting for an additional 30 percent of the fee. The fee of any special consultants should then be allocated.

We find that other direct costs average about 3 percent of the fee; and we use this figure in budgeting for this item, unless there are unusual considerations, such as the preparation of a model or color rendering, or the job requiring extensive travel during construction administration. In this case, we attempt to estimate the actual cost of this travel.

On the XYZ Elementary School shown in Figure 1, there were no special consultants, but you can see that 50 percent of the fee is already committed before overhead and direct labor costs are considered. As Jack Train notes in his article, indirect costs will generally amount to 100 percent or more of direct labor. Although ours has run over 100 percent in the past we have in the last year been able to hold it to that figure and are currently budgeting at that rate. This means that the remaining fee (in this case 50 per-

cent) must be divided equally between indirect expenses and direct labor.

Budgeting up to this point has been relatively simple. The real trick lies in allocating the direct salary expense to the performance of the various phases of the work. As an average, we allocate 10 percent of this amount to project administration, 10 percent to schematic or concept design, 20 percent to design development, 40 percent to working drawings and specifications and 20 percent to construction administration. On typical projects located in close proximity to the office, we find that this figure can be split equally between field work and office work.

Keep in mind that these are averages and must be varied to fit the particular circumstances of the job at hand. For example, on a large distribution warehouse, the structural engineering work could run as much as 20 percent of the fee, while both schematic design and design development might not be more than 10 percent of the total fee. True recognition of these values can only come from experience and from studying job cost accounting on previously completed projects of a similar type.

The final step comes in converting these dollar allocations to hourly rates. Again, historical data is desirable, because good job cost accounting records will show what the average cost of working drawings, design development, etc., are in a particular office. These figures can be arrived at, however, by taking the rates of persons involved in doing a particular type of work, estimating the percentage of their time that is put into this type of work, and averaging these on a weighted basis with others doing the same work to determine the average cost. By dividing these average hourly rates into the dollar allocation, we come up with budgeted hours for performing the various activities required in providing architectural services.

ESTIMATED A/E FEE

PROJECT NAME: XYZ ELEMENTARY SCHOOLCLIENT: XYZ BOARD OF EDUCATION

SCHEMATIC DESIGN

Study and Research Time = 80 Hrs
 Presentation Time = 3 (24" x 36") Sheets x 40 Hrs/Sheet = 120 Hrs
 Schematic Totals = 200 Hrs x \$ 6.50 /Hr = \$1300

DESIGN DEVELOPMENT

Study and Research Time = 200 Hrs
 Presentation Time = 6 (24" x 36") Sheets x 40 Hrs/Sheet = 240 Hrs
 Design Development Totals = 440 Hrs x \$ 6.50 /Hr = \$2860

CONSTRUCTION DOCUMENTS

WORKING DRAWINGS

16 (24" x 36") Sheets x 50 Hrs/Sheet = 800 Hrs
 Working Drawing Totals = 800 Hrs x \$ 6.00 /Hr = \$4800

SPECIFICATIONS

Writing Time = 80 Hrs
 Typing Time = 40 Hrs
 Collating & Assembly Time = 8 Hrs
 Specifications Totals = 128 Hrs x \$ 7.00 /Hr = \$896

CONSTRUCTION ADMINISTRATION

58 Weeks x 8 Hrs/Week = 464 Hrs
 Construction Administration Totals = 464 Hrs x \$ 6.00 /Hr = \$2784

PROJECT ADMINISTRATION

10% x Above Total Hours of 2032 Hrs = 203 Hrs
 Project Administration Totals = 203 Hrs x \$ 10.00 /Hr = \$2030

TOTAL ESTIMATED DIRECT ARCHITECTURAL LABOR COSTS = \$14,670

ENGINEERING

Mechanical = \$5,000
 Plumbing = \$3,400
 Electrical = \$3,900
 Structural = \$4,500
 Other () = \$—

Engineering Total = \$16,800

OTHER DIRECT COSTS

Reproductions 416 (24" x 36") Sheets x 60 ¢/Sheet = \$250
 Travel 400 Miles x 12 ¢/Mile = \$48
 Telephone = \$25
 Postage = \$25
 Other () = \$—

Other Direct Costs Total = \$348

INDIRECT COSTS

100% x \$14,670 (Direct Labor Costs) = \$14,670

TOTAL COST = \$46,488

PROFIT

Total Cost x $\frac{\% \text{ Profit}}{\% \text{ Cost}} = \frac{46,488}{83} \times \frac{17}{83} =$

\$9,522TOTAL ESTIMATED A/E FEE = \$56,010

The second approach, and as I said earlier, the more difficult one, is to arrive at a fee by estimating the amount of work involved and using this estimate as the budget for the project. Figure 2 shows the form we use for this approach. In this case, the procedures are reversed. You should begin by estimating the amount of direct labor required. In the case of schematic design and design development, you must estimate the number of hours of sketching, study and research required to come up with a design solution. This is the most imprecise aspect of the estimate, since it is impossible to predict the amount of time required to reach a design solution. This figure can also be affected by the adequacy of the program information submitted by the client and by the client's willingness to accept your judgment and recommendations.

The tendency is invariably to underestimate the hours required for design. When you have completed the estimate, if your design time is less than three-fourths of that required for construction documents, you had best take a second look at your figures. In addition to estimating the amount of study and research time, you must determine the number of sheets of drawings required to present the solution and multiply this by the number of hours required to produce these. In our office, we find that design drawings 24" x 36" average about 40 hours to produce. Again, your own historical data is the best source for this information.

In determining the hours required for working drawings, the best approach is to list each sheet that will be required in the finished drawings outlining the information that will be included on it. Some offices even go to the trouble of taking yellow paper and blocking out the sheets at half size to determine the details that can be included on each. Once this is completed you can count the number of sheets and multiply it times the

Figure 2

average number of hours required to produce a sheet of working drawings. Obviously, a sheet of complicated details will take more time than a sheet containing schedules, but we have found it best to work in average hours, and these are in the neighborhood of 50 hours for a 2' x 3' sheet in our office. Specification time can only be arrived at by estimating the hours that will be required to research and write the specifications and to type and collate them. Again, experience and job cost data on completed projects are the guiding factors.

In determining the hours required for construction administration, one need only estimate the number of weeks the job will be under construction, the number of hours he plans to spend on the job each week, and the time required in traveling to and from the job. If the job is relatively close to the office, you may be assured that in-office time (i.e., writing progress reports, checking shop drawings, processing change orders and applications for payments, handling correspondence and talking on the telephone with the owner, the contractors and the various sub-contractors) will equal the amount of time in the field. In a good job cost accounting system, field administration and office administration during construction should be coded separately. If you have done this, you can quickly determine if this ratio is typical of your office.

In our office, we believe that the project manager's time in supervising the work in the office and in dealing with the client and contractors amounts to about 10 percent of the cost of the above services, and we budget on this basis. In lieu of this, some offices budget conference time and time for bidding and evaluating bids. We lump these together with other project manager activities.

Once the hours are determined, one need only multiply them by the average hourly cost for each phase of

the work to determine the direct labor cost for the project. This figure can then be used to determine indirect expenses. Consulting engineers or the in-house engineering staff should be required to give you firm estimates on the engineering costs and to live with them once you have cranked them into the fee. Estimates are then obtained from other consultants and added to the direct cost.

The profit target is then determined and added to the total. If direct expenses such as printing, long distance calls and travel costs and expenses are to be a part of the fee, they should be estimated and added to determine the final fee.

As soon as this estimated fee becomes a part of the contract, you must live with it; and it, therefore, logically establishes the budgeted hours and costs for the various phases of the work.

One last caution—the tendency is to underestimate the time required to do any project. Even highly experienced project managers, when asked for the first time to estimate the hours required to design and produce drawings for a specific project, will miss the final cost by tremendous amounts. When I first began asking project managers in my office to come up with these figures, I found that I could double their estimates and be nearer to what I knew the final cost would be.

Remember that the best route to getting more work is to do the job well and to bring it within the budget, not to do it at the lowest fee. In budgeting your cost, allocate adequate time to do the job properly and seek a final fee that will support this.

Mr. Ferebee is President of the Charlotte architectural and engineering firm of Ferebee, Walters and Associates.

CONTROLLING COSTS WITH THE AIA FINANCIAL MANAGEMENT SYSTEM

by G. Neil Harper

The control of the cost of architectural services has become an increasingly important aspect of architectural practice, especially in the last several years of rapidly rising salary costs for professional personnel. From the public's point of view, it is important that the client understand the full scope of services which is being provided, and that reasonable budgets for these services be established and monitored for overall efficiency of the work. From the architect's point of view, it is important to control the costs of providing the services, in order to complete the project in a satisfactory manner, with an equitable salary base for employees and a fair profit to the principals.

One approach which increasing numbers of firms are finding useful in

controlling costs is the AIA computer-based Financial Management System. The main features of this system are best described by reference to several figures which depict the highlights of the system's organization, input, and selected output reports. A complete description of the system, including detailed input requirements and mockups of all output reports, is contained in the book, *FINANCIAL MANAGEMENT FOR ARCHITECTURAL FIRMS: A MANUAL FOR COMPUTER USERS* (1971) which is available from the AIA (\$8 AIA members; \$10 non-members).

Figure 1 identifies the familiar data that constitutes normal operating data. Virtually all offices employ some form of time sheets and a record of cash disbursements and receipts through

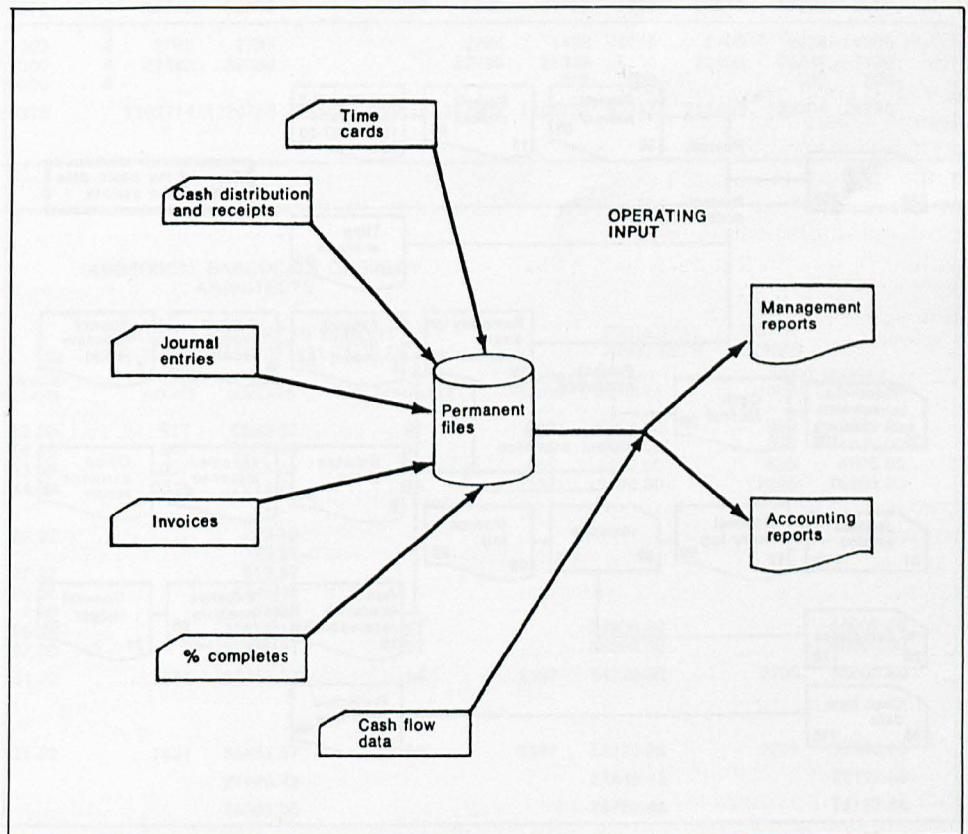


Figure 1

an office checking account. Journal entries are far smaller in volume and are typically made by the bookkeeper or auditor on some periodic basis for various adjustments to the books. Invoices, or statements to clients for services rendered, are an essential input data element for a full-scale implementation of the system. A few firms will add project managers' percent complete reporting and cash flow input data to the system, although this data is not essential to system operation. In general, all input data is used to modify the permanent files and to produce project related management and accounting reports.

Figure 2 shows an overview of the complete system, beginning with the

initial input data at the left and progressing through the various accounting logs and project related reports on the right.

From a technical point of view, the single most important characteristic of this series of reports is that they are integrated into a single system. This makes accurate comparison of figures and reconciliations a natural by-product, rather than a time consuming and uncertain task. Many firms will have parts of the information described above; some will be operational on computers; but very few, if any, will have the benefits of completeness and certainty of reconciliations provided by the integrated AIA system.

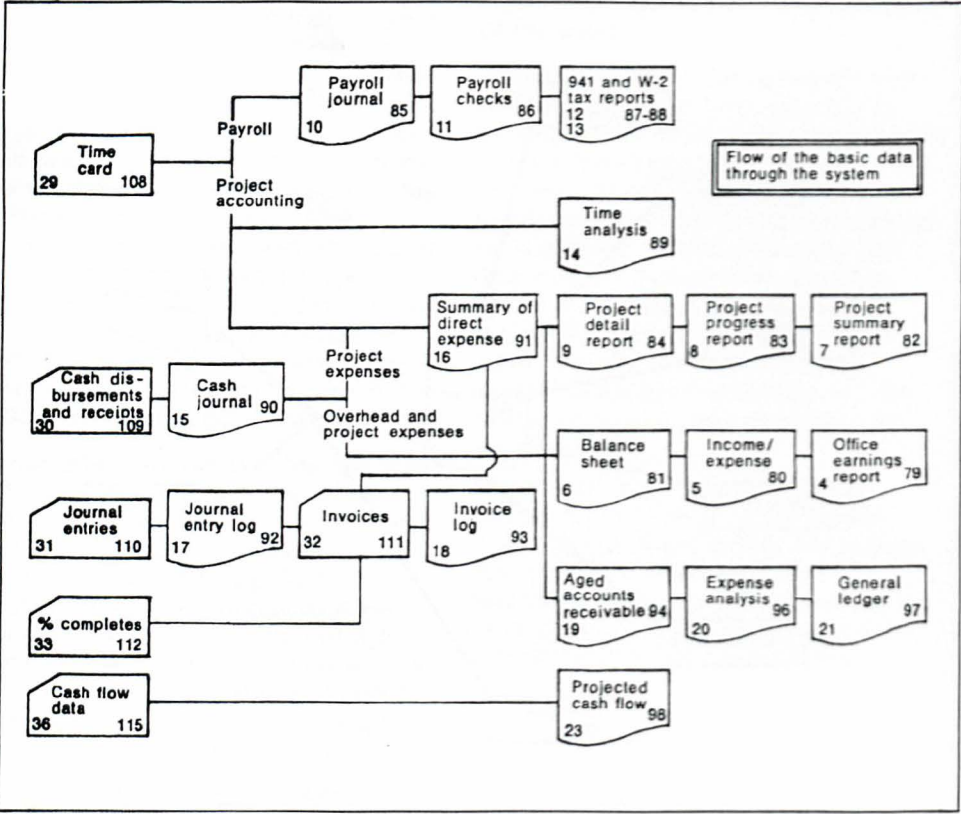


Figure 2

Figure 3

ANDERSON, BABCOCK & CROWLEY
ARCHITECTS

OFFICE EARNING REPORT
FOR THE PERIOD 3/1/71 - 3/31/71

PROJECT		PROJECT TO DATE								YEAR TO DATE				
NUMBER	NAME	FEE	PCT COMP	I T	EARNED INCOME	BILLED	UNBILLED SERVICES	RECEIVED	A/R	SPENT	PROFIT (LOSS)	EARNED	SPENT	PROFIT (LOSS)
95.00	MISC JOBS			3										
98.00	PERSONAL SERVICES			4	1420	1420		1433	13-	1009	410	1420	1009	410
1000.00	COMPLETED JOBS	483932		3	483932	483732	200	481732	2000	462578	21353		1346	1346-
1005.00	CITY HALL	80000	92	4	84820	84820		68396	16423	76901	7919	9820	10930	1109-
1019.00	BALBOA	38569	94	3	38569	73485	34916-	28053	45432	79333	40764-		4692	4692-
1023.00	ABC PLAZA	7500	58	4	5540	5540		5540		4770	769	791	552	238
1025.00	J L SMITH HOME	5000	21	2	1471		1471			1303	168	184-		184-
1027.00	CITY HALL LOBBY	10000	32	4	3020	3020		3020		1495	1525			
1028.00	CITY HALL AC	16000	79	4	22901	22901		10391	12509	34843	11942-	10040	13673	3633-
1030.00	AJAX FACTORY	28800	69	3	24000	28800	4800-	25000	3800	30429	6429-	4007	11733	7726-
1031.00	PROJECT Y	10300	99	3	10300	10300		10300		16520	6220-		1962	1962-
1033.00	DANCE CENTER	28000	21	4	6772	6772		5017	1755	7937	1164-	702	1232	529-
1034.00	GOVERNMENT CENTER	55000	64	4	52800	52800		41800	11000	43752	9047	16600	12250	4349
1035.00	WGH ELEMENTARY SCHOOL	53200	53	4	54569	54569		37489	17080	35912	18656	25152	9345	15806
1036.00	111 BEACON STREET	68000	48	4	48960	48960		42160	6800	35998	12961	13689	11328	2360
1037.00	FOREST HILLS	20000	53	4	13500	13500		12000	1500	14117	617-	2519	3763	1244-
1038.00	KLH OFFICE	16000	84	4	14761	14761		14761	13448	1313	792	665	127	
1039.00	UN WISC LIBRARY	100000	98	4	132862	132862		72991	59871	116934	15928	34917	25537	9380
1040.00	GNH MUSIC HALL	100000	47	4	56855	56855		31865	24989	37758	19096	10115	11194	1079-
1041.00	LANDOWER MEMORIAL	20000	99	4	34793	34793		19332	15461	26152	8641	14793	13230	1563
1042.00	BRUNSWICK PLANT	18000	58	4	22872	22872		13425	9446	16997	5874	12143	8965	3177
1043.00	MOBIL WAREHOUSE	79075	7	4	32718	32718		22909	9808	31450	1267	20858	18803	2054
1044.97	MOLINE BUS DEPOT			0										
1046.00	VA HOSPITAL	7000		4	2795	2795		2795		1428	1366	2795	1428	1366
1047.00	CENTER PLAZA	112000		4	32480	32480			32480	25349	7130	32480	25349	7130
1048.00	SOUTH HIGH SCHOOL	10000		4						309	309-		309	309-
TOTALS		1366376			1182714	1220759	38045-	932857	287902	1116731	65983	213452	189304	24148

Figure 4

ANDERSON, BABCOCK & CROWLEY
ARCHITECTS

	PROJECT NUMBER	CITY HALL 1005.00		PROJECT PROGRESS REPORT FOR THE PERIOD 3/1/71 - 3/31/71			PRINCIPAL PROJ MGR		SMITH JONES	
DESCRIPTION		SPENT THIS PERIOD HOURS	DOLLARS	SPENT TO DATE HOURS	DOLLARS	PCT COMPLETE	EARNED HOURS	BUDGET DOLLARS	TOTAL HOURS	BUDGET DOLLARS
PRELIMINARY DESIGN		8	52.00	917	6693.52	97	882	6402.00	910	6600.00
SCHEMATIC DESIGN		18	68.36	847	5869.66	97	640	4656.00	660	4800.00
DESIGN DEVELOPMENT		31	123.66	867	5356.58	97	615	4462.00	635	4600.00
TOTAL/LABOR		57	244.02	2631	17919.76	96	2137	15520.00	2205	16000.00
DIRECT COSTS										
TELEPHONE			22.60		28.10					
MATERIALS OFFICE					79.21-					
REPRODUCTION EXP			137.42		612.52					
CS-IDC TIME			1000.00		4245.49					
MEALS HOTELS MIS			2.00		35.80					
OTHERS			125.18		32689.11	97		38800.00		40000.00
TOTAL/DIRECT			1287.20		37531.81	97		38800.00		40000.00
CONTRACT TOTALS		57	1531.22	2631	55451.57	96	2137	54320.00	2205	56000.00
REIMBURSABLES										
TOTAL/REIMBURSABLE										
PROJECT TOTALS		57	1531.22	2631	55451.57	96	2137	54320.00	2205	56000.00
OVERHEAD ALLOCATION					21449.48			21449.48		22112.86
TOTALS WITH OH					76901.05			75769.48		78112.86

In Figures 3 and 4 two reports have been selected to illustrate in somewhat more detail the nature of the reports produced by the system. Figure 3 is a mockup of the office earnings report which shows the profit or loss on each project in the office, both on a project-to-date basis and year-to-date basis. Note that billings, receipts and accounts receivable are shown on each project, as well as the work in process (unbilled services). The figures in the "spent" column include all labor, direct and reimbursable costs and an allocation of actual office overhead. Thus the expenses reflect the full costs required to execute the job, and the resulting profits are an accurate measure of the contribution of each job to the overall office profits. The office earnings report is reconciled to the periodic financial statements of the firm automatically through the normal trial balance in the general ledger.

Figure 4 represents a typical project progress report, which would normally be reviewed by the project manager. The essential feature of this report is a comparison of actual costs with a prorated ("earned") portion of the budgeted cost for each phase and direct cost item. The total budget for each phase is multiplied by the fractional percent complete provided by the project manager to produce the figures in the "earned budget" column. Thus, if the phase is within its prorated budget, it should have used \$6,402 in preliminary design. It has actually used \$6,693—somewhat over budget.

In general, use of the system has provided a far more comprehensive and systematic set of information to principals than has ever been available before. Much better knowledge of the full cost of job production, made possible by the system, is contributing to more knowledgeable fee negotiation and is clearly separating those portions of the work which may be billable as extras. This provides a fair

basis for both architect and client to negotiate for extra services beyond the original scope of work, based on full knowledge and control of the costs of these services.

Three levels of the system have been developed to meet the needs of differing sizes and complexities of firms. A basic level, consisting of time card input and labor cost reporting, is designed for smaller firms and those desiring initial entry at minimum cost. An intermediate level adds payroll and direct cost reporting. The full system adds invoicing and regular financial statements. It is of some interest to note that a new small firm package has recently been developed to serve the reporting needs of the small architectural office.

Through its computer-based financial management system, the AIA has made a significant contribution to the theory and practice of financial management for professional firms. The advantages of the Institute's funding a single program to serve the requirements of the profession have become clearly evident as smaller and medium sized firms have been able to install a system to serve their immediate needs, with room for growth to a larger, more complicated system at a small fraction of system development cost. Perhaps equally noteworthy, the profession now owns an operational system which facilitates better data collection and information sharing on such items as fee negotiation, wage rates, overhead ratios, profitability, etc., based on a common set of accounting procedures and reporting techniques. In short, the system is now capable and available to serve the individual office in a practical way, with resulting positive benefits for the common good of the profession.

Dr. Harper is President of Harper and Shuman, Inc., Administrators of AIA/FMS, 1278 Massachusetts Avenue, Cambridge, Massachusetts.

THIS BUSINESS OF ARCHITECTURE PRACTICE PROFILES

Introduction

by Charles C. Dixon, Jr., AIA
Contributing Editor

An invitation was extended to the NCAIA Chapter Presidents beginning with the year 1964 through 1975 for them to submit a management-oriented profile of their firm for inclusion in this special convention issue. They were additionally invited to supply any pertinent photographs or exhibits relative to their article.

The year 1964 was selected as the point of beginning after it was noted that the 1963 Chapter President, Arthur C. Jenkins, Jr., AIA, passed away during his term of office, and his firm no longer exists. This created a natural break in the line of succession, and a group of at least ten offices from across the state were represented in the years since 1963.

NCAIA Chapter Presidents, 1964-1975:

- | | |
|--|--|
| 1964 S. Scott Ferebee, Jr., FAIA
Ferebee, Walters & Associates | 1970 Richard L. Rice, AIA
Haskins and Rice Architects |
| 1965 Leslie N. Boney, Jr., FAIA
Leslie N. Boney, Architect | 1971 Fred W. Butner, Jr., FAIA
Fred W. Butner, Jr. & Associates |
| 1966 Macon S. Smith, FAIA
F. Carter Williams, Architect | 1972 Beverly L. Freeman, AIA
The Freeman-White Associates, Inc. |
| 1967 James C. Hemphill, Jr., FAIA*
Odell Associates Inc.
Professional Design Partnership | 1973 J. Bertram King, FAIA, Architect
J. Bertram King |
| 1968 J. Hyatt Hammond, AIA
J. Hyatt Hammond Associates, Inc. | 1974 Charles H. Boney, AIA
Leslie N. Boney |
| 1969 J. Norman Pease, Jr., FAIA
J. N. Pease Associates | 1975 Turner G. Williams, AIA
F. Carter Williams, Architects |

*Hemphill was on the staff of the Odell firm when he served as Chapter President, therefore invitations were extended to both his previous and current firms.

1964

Ferebee, Walters & Associates—Architects/Engineers/Planners
Charlotte, North Carolina



Photo by Gordon Schenck

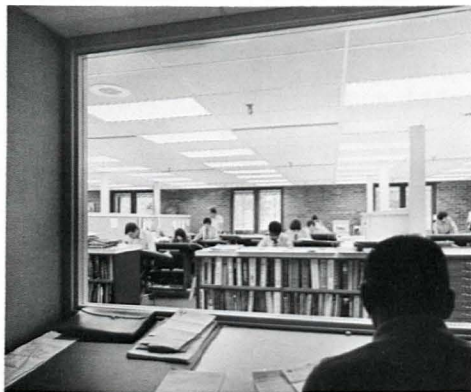
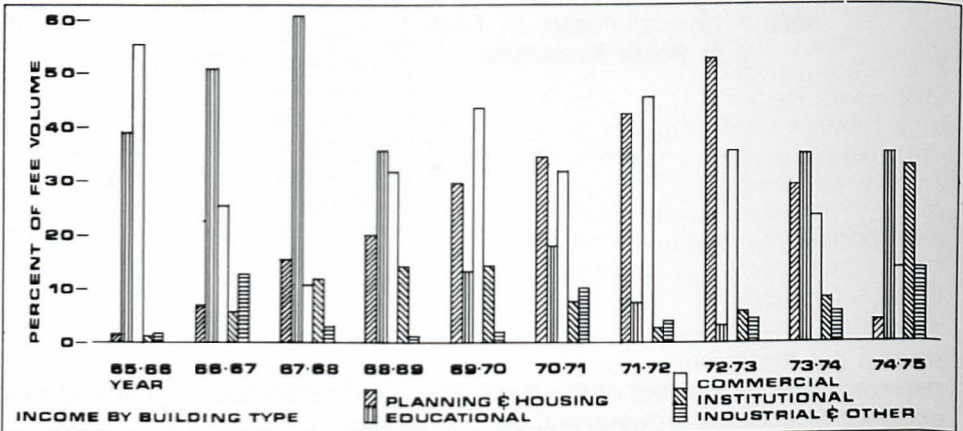


Photo by Gordon Schenck

The present day architectural, planning and engineering firm of Ferebee, Walters & Associates was organized in 1953 as Higgins and Ferebee. It became Higgins, Ferebee and Walters in 1958, Ferebee and Walters in 1959 and Ferebee, Walters and Associates in 1965. It has grown steadily over the years and currently, in combination with the staff of its five-year old subsidiary engineering corporation, FWA Engineers, Inc. has some 44 staff members, including eleven architects, four engineers and 14 additional professional graduates. In addition to offering engineering services, the firm has interior designers and planners on its staff to expand its in-house capabilities.

The firm was incorporated in 1965 as a business corporation, but with the advent of the State of North Carolina's Professional Corporation Act it elected to become a professional association in 1970. The firm's stock is currently held by seven individuals—six architects and one engineer.

After being located in downtown Charlotte for slightly more than ten years, the firm relocated to new offices in the suburbs in 1965. After expanding its space in this location on three occasions over a nine year period the



firm again moved to new quarters in 1973. It is presently located in Providence Square, a village shopping center within a PUD-like development designed by the firm.

The firm conducts a broad architectural practice in most major building types. From the late fifties through the middle sixties its predominant building types were educational facilities and shopping centers. In the late sixties and early seventies there was a shift toward other types of commercial work, multi-family housing and land planning. The past two years has seen a reversal of this trend, with school projects again becoming a dominant portion of the firm's activities with a concurrent increase in other types of institutional and governmental work.

Geographically speaking, the firm's practice is concentrated in the Carolinas with an occasional project in Maryland, Virginia, Georgia, Florida and Tennessee.

During its growth from a small firm in the early 1960's to its present size, the firm's internal organization has undergone a number of changes. The vertical organization of its early years was followed by two variations of a departmentalized arrangement which has since been replaced by a multi-studio or team approach. This latter method of practice, which now has a seven year history, has proven to be by far the more satisfactory, both from the standpoint of improved client communications and increased efficiency. The firm's three architectural teams are each directed by a principal and are supported by a single administrative group, a separate team of construction administrators and FWA Engineers, Inc. Each team includes members with varied educational and experience backgrounds.

The current organizational arrangement is the direct result of an in-depth management study of the firm conducted by Weld Coxe, a Philadel-

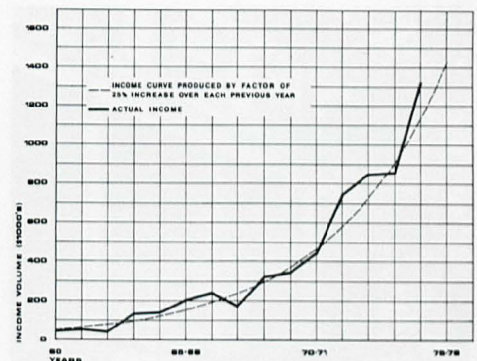
phia-based management and communications consultant, and the firm's own analysis of what was needed to maintain its "personal service" reputation with its clients. This organization enables the firm to hold on to the best attributes of a small office, while going after larger and more complex commissions. It has served as the foundation for continued growth and expanded services.

Since 1960 the firm's growth as measured in architectural fee volume has increased at an average rate of twenty-five percent over the previous year. Even with an average inflation rate of eight percent in the construction industry, this is a healthy growth and will be difficult to maintain as the curve approaches the vertical.

Ferebee, Walters & Associates has pioneered in the area of financial management. It was the first firm to install (April, 1970) the American Institute of Architects' computerized Financial Management System and has found this to be an extremely valuable management tool. Installation of the system has enabled the firm to maintain financial and job cost records in a bi-weekly current status while more than doubling in size with only one bookkeeper working on less than a full-time basis.

An unusual feature of Ferebee, Walters & Associates is its optional work week. The firm permits technical employees to work nine-hour days on Mondays through Thursdays and eight hours on every other Friday, with the alternative Fridays as days off. This program has been in operation for more than three years, and most of the technical staff has chosen the optional day-off plan. No noticeable change in the firm's efficiency has been observed.

Principals of the firm feel that participation in professional activities broadens their knowledge and understanding of architectural practice thus strengthening their service to their



Income Curve

clients. Typical of this involvement are Mr. Ferebee's activities culminating in service as President of the Institute in 1973, Mr. Robinson's service as Chairman of the Institute's national committee on Automated Practice Technology, Mr. Dixon's service as President of the Charlotte Chapter of CSI, and Mr. Walter's service on the North Carolina Board of Architecture.

The firm's philosophy is based on a belief that their clients can be given creative design and soundly constructed facilities within the framework of their budgets and time schedules, and that they should receive the personal attention of a principal from the beginning to the end of a project. Adherence to these principles has resulted in satisfied clients who return frequently with new commissions and are quick to recommend the firm to prospective new clients. It is a philosophy that has served Ferebee, Walters & Associates well in the past, and one they believe will serve them well in the future.

1965/1974

Leslie N. Boney, Architect
Wilmington, North Carolina

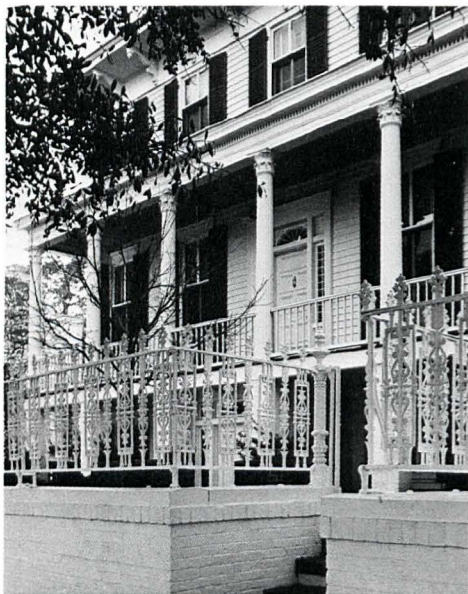


Photo by Gordon Schenck

The firm was organized under its present name in 1922 by Leslie N. Boney (1880-1964). A 1903 graduate of North Carolina State University (A and M College), he had been practicing architecture prior to the 1915 Registration Act and was also associated with other firms in the Wilmington area.

From the early 1900's, when he planned a school for his home town of Wallace, his principal practice was in the field of education and his schools are to be found in more than fifty of the State's one hundred counties. His schools in the 20's and 30's were noted for straightforward plans housed in a red brick structure with white trim and classical porticoes. Most of these early buildings are still in use. The firm pioneered in North Carolina's public housing program, planning the first project in the State in the late thirties.

Following graduation from North Carolina State, the three sons, Leslie, Jr., William J. and Charles H. joined their father in a unique family partnership of four architects. Operating from the 1854 headquarters house located in the Wilmington Historic District the organization has spread from the elder Boney's home to adjoining residential buildings.

In the post World War II period the firm expanded its operations in the planning of schools, community colleges and university buildings as well as in housing and banking institutions. The firm's general practice also includes hospitals, churches, industrial and institutional buildings.

Current commissions include a variety of work in the field of education, housing, medicine and other public service facilities.

The present staff of twenty-five includes six architects, a landscape architect and an interior designer. Engineering consultants are retained as specialists in their fields.

A partner has overall responsibility to each client. The work is organized with a Job Captain responsible for a project through the design and production stages. Other specialists in the firm consult on site planning, specifications, engineering coordination and interior design. Contract administration is handled by separate personnel with field changes coordinated through the Job Captain.

The partners share responsibility for the firm's operation in three general divisions: Design and Production; Contract Administration and Technical Coordination; and Management, Project Development and Public Service.

The firm feels that man achieves his greatest satisfaction in creatively working for others. Through the years the organization has attempted to render service to the public through various local, state and national organizations. In the process of serving others, greater insight is achieved into the problems of the day and their potential solution. The organization is thus better able to carry out the philosophy of the firm which is to create attractive buildings keyed to the needs of the client and his budget.

1966/1975

F. Carter Williams, Architects

Raleigh, North Carolina

The firm originated in 1940 with F. Carter Williams, FAIA. Except for an interruption by World War II from 1941 to 1946, the firm has continued to the present time under the same designation. Macon S. Smith, FAIA, rejoined the firm in 1946 and Turner G. Williams, AIA, in 1948. They became partners in the firm in 1955. Gene W. Jones, AIA, became the fourth partner in 1969.

The office has varied from ten to sixteen members including a secretary and Peggy Creighton, CPS, Office Manager. Architectural services have utilized various independent consultants as needed for a general practice.

Services provided by the firm have included program analyses, feasibility studies, reports and brochures, site planning and individual project design and consultation. The firm has developed its own master specification on a magnetic card system. Accounting has included job costing and analysis since the firm originated.

Opportunities have included consultation in India and Africa in International Food and Animal Research Laboratories, design of Phytotrons for Duke and North Carolina State Universities, Mingos Coliseum and Student Union for East Carolina University, various buildings for the State of North Carolina, State Institutions, and public educational facilities. Private work designed by the firm has included office buildings, banks, churches, apartments, and other commercial projects.

The partners' interest in professional organizations is demonstrated by their service in various positions of responsibility since 1946 in the Raleigh Section and the North Carolina Chapter of the American Institute

of Architects, the Construction Specifications Institute, and the American Society of Civil Engineers. Community interests have included service on local Boards and Planning Commissions.

1967

Odell Associates, Inc.
Charlotte, North Carolina



Photo by Gordon Schenck

Odell Associates, Inc. is a multi-disciplined firm with a staff of over one hundred, providing comprehensive design service in planning, architecture and engineering and whose projects encompass several south-eastern states. It is a design-oriented firm with projects in nearly every category of building type. While enjoying a special expertise in several building categories, the basic philosophy of the firm is to offer design services in all types of planning and construction programs.

Founded in 1940 by A. G. Odell, Jr., FAIA, the firm grew to a sound practice with some dozen employees in the early 1950's, and was operated as a sole proprietorship. In the late 50's, a decision was made to add in-house engineering capabilities and by 1960, the basic cadre of these staffs were secured. By 1962, the staff totaled over 50 persons and practiced under the name of A. G. Odell, Jr. & Associates.

In 1970, the practice changed to a corporate organization, and the name

changed to Odell Associates, Inc. At that time, several other principals and key associates became stockholders. This broadened the management base of the firm and provided for future continuity of services over the decades ahead. A departmentalized system was established, with management responsibilities for administration, design, production, construction, and engineering resting with the respective department directors.

In 1973, the staff was reorganized into a team concept and now operates with 5 relatively independent architectural teams. These teams report to a Director of Operations for assistance in coordination of workloads, personnel assignments, and general priorities. The Division of Support Services is directed by a principal responsible for all of the engineering staffs operating under structural, mechanical, and electrical departments, interior design, landscaping, and production and construction quality control. The blending of engineering talents into the various teams is accomplished on a project basis, thus maintaining a flexibility of utilizing special talents for unique design capabilities.

In 1966, the firm secured an IBM 1130 computer, one of the first to be utilized exclusively by architects in the southeast. The computer is a scientific machine and is used principally for heating and air conditioning design calculations, structural programs, civil engineering, quantitative material take-offs and costs estimating, as well as in-house accounting, and management procedures. All contract documents are microfilmed for flexibility in filing and storage for future reference. Recording and retrieval is accomplished by in-house microfilm equipment.

Specifications are handled by means of an extensive master set of specifications whereby detailed project

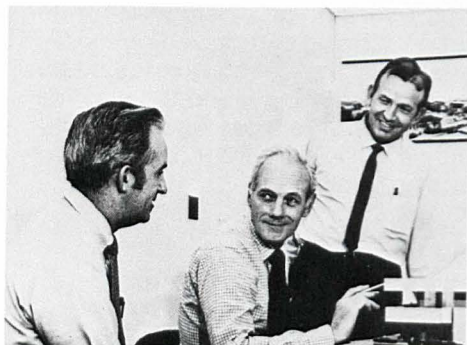


specifications can be developed in the shortest possible time. Special research and assistance on new products and techniques are available through Specification and Product Specialists, and all typing is accomplished through the use of high-speed automatic typewriters with tape retrieval banks and storage capabilities.

In the early 1960's, a considerable amount of research was conducted into the potential of photographic cut-and-patch drafting and similar techniques for production time savings. Many standard details were committed to the retrieval system to facilitate the abbreviation of drafting time.

Complete interior design and landscape services are provided to a majority of clients. One of the services of the firm is a developed program involving an analysis of long-range space needs through assistance of special interview techniques, a structured programming format, and computerized analyses. Other expertise of the firm is the inclusion of in-house specialists in real estate, solar energy research, and a number of unique engineering design specialties ranging from uninterruptable power systems to wind tunnel testing. Projects include aspects of value analysis, life-cycle costs analysis, cathodic protection, and similar techniques.

The firm's staff numbers approximately 110 in the Charlotte office with a branch office in Greensboro. The firm has been awarded a number of design awards and its work has been illustrated in numerous national and international publications.



1967

Professional Design Partnership Charlotte, North Carolina

In a well-balanced professional organization each man brings to the team different but complementary talents. Any team where all members have the same taste, the same point of view, the same life style, and the same shortcomings is always less successful than the one composed of differing types, where one's shortcomings are complemented by another's strong points. So many young firms fail because the members of the team do not recognize the many, many aspects of architectural practice that must be properly covered.

Professional Design Partnership was organized at the beginning of 1974 by James C. Hemphill, Jr., Cameron W. Hood and John A. Hemphill, and was the outgrowth of the firm James C. Hemphill, Jr., FAIA, Architect organized at the end of 1970. The firm has as its central theme teamwork, and members of the organization have been carefully selected for the talents they can bring to the overall team. This organization is in contrast to that type of firm organized around one single decision maker. It is believed by stressing teamwork the organization can attract and keep more highly qualified people.

The firm has qualified people within the current staff to do architecture, interior design, city and urban planning work, and has active commissions in all these fields. By having a landscape architect's office contiguous these services can be correlated with the firm's in-house capabilities. With a full service engineering company just across the hall all design services are available within a few feet.

This office is generally organized on the "architect in charge" principle, where every project in the office is under the personal charge of one of the architects. At the same time, every member of the team becomes

involved in every project in the office. This crossfire of involvement tests out the validity of the design and improves the quality of the service. The weak decisions get bolstered and the wild shots get redirected.

At the same time each member of the team has certain special responsibilities in the overall functioning of the office. One is responsible for overseeing the bookkeeping, another for simplicity of construction and project costs, and another for design and code requirements.

The firm is fortunate in having many years of background experience to draw on in the field of management, which allows for knowledgeable control, direct decision making, planned cash flow and project scheduling. The standard AIA bookkeeping system was the foundation of the internal budgeting and cost control system established. The expenditures for each coming year are programmed in advance, and each month when the books are balanced a report is made on how each budgeted item stands in relation to expenditures to that point. Whenever a new project is started, work hours are budgeted for each phase of the work so that on each month the hours charged on each project can be checked against the hours budgeted.

In several cases the firm has joint ventured with a developer on a successful project. This is a new and interesting field which requires certain special knowledge and talent in order to be successful, a field which will be expanding and becoming more important as time progresses. In this rapidly changing world the practice of architecture must adjust its style and approach in order to properly serve its clients.

Hyatt Hammond Associates, Inc., Architects—Engineers—Planners
Asheboro/Greensboro, North Carolina

J. Hyatt Hammond Associates, Inc., Architects—Engineers—Planners maintains one firm which operates in two locations, Greensboro and Asheboro. Home base for the staff of 32 is divided about equally, but the 24 miles between the two offices is commuted by all personnel as work load dictates. The present staff has grown from a one-man office which was started in Asheboro in 1957 by Hyatt Hammond who remains head of the firm today. Associates of the firm include two architects, one architect/engineer and one engineer.

All design is formulated by the collective direction of the principal, the chief designer and the respective architect in charge of the design and production team assigned to each project.

When construction documents for a project are complete the contract administration team follows up to negotiate or bid the project and get it built. The original project architect follows the progress of the bidding and construction to assure adherence to the design and to review for revisions or changes which at any time may improve the project. The contract administration team includes a staff of experienced construction observers with long term construction experience.

Services offered by the firm include:

- Land utilization, space analysis, programs
- Land planning
- Architectural design
- Interior design
- Landscape architectural design
- Cost estimates—appraisals
- Construction observation
- Engineering—structural, electrical, mechanical
- Surveying.

The structure of the office organization requires that the head of the firm, the chief designer and the project architect interact closely during the design process and regularly through

the complete development of the project.

Specifications are originally developed for every project by an experienced specification writer who utilizes "Masterspecs" as his guide. He confers with the project architect to assure that the design dictates the specifications.

Day to day bookkeeping is handled by the business manager with an independent CPA providing an individual project computer print-out every two weeks.

The office maintains a general practice with current projects in various stages of development for most of the following types of clients: local, state and federal governmental agencies including the North Carolina Zoological Authority; all levels of educational institutions; commerce and industry; banking and savings and loan institutions; and religious institutions.

The building principles in the practice are based on its broad interpretation of design: appearance, function, permanence and cost. Our basic responsibilities are: integrity, never releasing a project until "The Best" has been achieved, keeping all public relations on any client's projects at a high level, believing that deadlines and budgets must be met and remembering to visit completed projects to learn from occupant experience.

With all factors of practice considered, the objective is to get buildings built, and built well, on time, within the budget and with distinction.



Photo by T. R. Easterling



Photo by T. R. Easterling

1969

J. N. Pease Associates—Architects/Engineers/Planners

Charlotte, North Carolina

J. N. Pease Associates was originally organized as J. N. Pease and Company, a partnership, in 1938. At that time there were two partners, J. N. Pease, Sr., and J. A. Stenhouse. The firm was incorporated in 1942 and the name was changed in 1962 to J. N. Pease Associates, Architects-Engineers-Planners. It is still a corporation, now qualified under the Professional Corporations Category.

The firm is organized with the usual corporate officers, all of whom are registered architects or engineers. Associates of various grades (all registered architects or engineers) own or have the option to acquire stock. One hundred percent of stock ownership is held by registered professionals who are actively engaged in practice with the firm.

Since the firm's inception, a diversified practice has been sought. Particular emphasis has been placed on the team design concept. The firm contains two divisions—Architecture and Engineering—with other design disciplines working within one of these divisions. Besides the usual design and production functions for architectural projects, the Division of Architecture also includes Landscape Architecture, Planning and Urban Design, Interior Design, and Graphics Design. The Division of Engineering consists of the usual building related engineering disciplines, such as Structural, Electrical and Mechanical Engineering. In addition to these, the firm also practices Civil/Environmental Engineering. Assignments are made according to the project's basic characteristic and type. An architectural project would thus be assigned to the Division of Architecture and they, in turn, would call on the necessary engineering or other expertise to complete the total design team.

Outside consultants are seldom used since all of the normal building

design capabilities are found in-house. Consultants are used for very specialized subjects, such as sub-soil investigations, acoustics, unusual food service, etc.

Design services are further complemented by an in-house computer (IBM 1130 system) providing computerized production cost data throughout activity of each project, job cost estimates, and computerized payroll system, general accounting, and certain engineering design. The PSAE system is utilized where applicable.

An affiliate operation, MCS, operates as a subsidiary offering computer services in Structural Engineering, Civil Engineering, Mechanical Engineering, Electrical Engineering, Construction Cost Estimating, Project Control Systems (CPM), and payroll systems, cost reports and general accounting.

The firm's office is located in Charlotte. There are currently 125 full-time persons on the staff. Included are 21 registered architects and 23 registered engineers, 1 registered landscape architect, 3 planners, and 2 interior designers. Professional registrations by officers and associates as architects, engineers or planners are held in 21 states. J. N. Pease Associates operates primarily in North Carolina. In very recent years, project locations have ranged from Florida to New Jersey and west to Texas.

The Firm of Haskins and Rice, Architects was formed by Albert L. Haskins, Jr., FAIA and Richard L. Rice, AIA in 1954. However, this partnership was preceded in Raleigh by the firms of Cooper, Haskins and Rice organized in 1953, Cooper and Haskins formed in 1947, and the Office of Albert L. Haskins, Jr. in 1945. The architectural experience of Albert L. Haskins, Jr. and Richard L. Rice dates from 1931 and 1941 respectively.

Projects accomplished have been varied. These have included schools, churches, college and university buildings; institutional, commercial, industrial and governmental buildings; housing and residences. The majority of the nearly 600 completed projects have been located in North Carolina, but several have been accomplished in Virginia, South Carolina and Florida.

A staff of thirteen technical and administrative persons comprise the firm today, with six of these being architects. The two principal and four associate architects in the firm are all active members of the American Institute of Architects.

Albert L. Haskins, Jr. is in charge of public relations, contracts, office management, and construction administration. Two architects, and other personnel, work with him in the administration of construction and other activities.

Richard L. Rice has the responsibility for architectural design, construction drawing, production and specifications. Two architects work with him, and other personnel, as designers and production coordinators.

In general, the team concept is employed to carry a project through programming design, and construction document phases. Although a construction administrator takes over at that point, constant

liaison is maintained with the original team to insure design integrity. The best available consultants are used for structural, mechanical, electrical, acoustical engineering and other technical requirements. Although each staff architect is given much responsibility, the partners are in constant touch with all phases of each building project, contributing their combined design and construction experience of over seventy-eight years.

The firm has developed a modular concept for building design and construction which has been used successfully in six buildings to date. This system has simplified design and construction with flexibility in planning. It has provided buildings of great durability that are economical and readily adaptable to future modifications.

A commercial computer account is maintained to process a number of programs used for various technical tasks including perspective drawing. One of the staff architects is an experienced computer programmer.

Specifications are in the process of conversion to the Masterspec System. This organization was a pioneer in the Modular System of Dimensional Coordination and has always emphasized the economical use of materials through careful planning.

This firm has been exceedingly proud of the trust placed in it by its clientele. It has the policy to give of its best to each project, regardless of scope, and to promote and maintain the high standards of professional practice as set forth by the American Institute of Architects.

1971

Fred W. Butner, Jr., Associates - Architects

Winston-Salem, North Carolina

Started in 1952 as a new one-man office, in two rooms, and one telephone with a long cord, this firm has grown to include eight other members while continuing as a single principal with associates. Presently the firm includes four architects, three draftsmen, one field inspector and a secretary. One associate serves as job coordinator and administrator while the other architects serve as individual project captains. The principal's time is spent primarily with clients and overall project and office administration.

The firm's current base of operations is a converted residence on the edge of the downtown Winston-Salem business district. It consists of an entrance hall, reception-secretarial space, principal's office, a two room drafting area, conference room, a work-storage area, and a combination supply, sample and print room.

This is a progressive firm with emphasis on quality solutions to contemporary building programs and prides itself in its offering of personalized service. Effort has been made to limit its projects to those requiring only complete professional services, (including in some cases control of interiors and landscaping). We find this results in better finished projects and consequently satisfied clients which in turn bring about future commissions.

In the early years, this firm made it a point not to specialize in any single type of work but to enjoy the interest of varied types. The first few years were spent on residential, small commercial, and school and church alterations and additions. Later savings and loans, banks, schools, shopping centers, trucking facilities, churches, YMCA's, restaurants, apartments and a wide variety of commercial and office complexes were developed. The largest single type of work has been in the area of educational facilities; and the firm's

commissions include approximately seventy public schools, college buildings, and additions.

Other types of current projects ranging in size to over \$5 million include municipal and office buildings. While a majority of the firm's work has been limited to the piedmont and western North Carolina, it also has completed projects in other areas of the state as well as in South Carolina and Georgia.

Much attention is paid to close cost control in the early stages of planning. Field inspection is considered of paramount importance and until only a few years ago, Butner attended to this phase of the practice personally. The original goal of doing a wide variety of projects and still retaining a small to medium size firm has been achieved.

Butner feels that strong management control by the principal along with dedicated in-depth coordination and design by associates and conscientious detailing of contract documents and intense field inspection account for the quality of work and meeting of the budgets which bring repeat clients. He admits that he learned earlier in his practice the following facts:

- 1) No one firm can do all the work.
- 2) One must be able to walk away from a bad proposal.
- 3) Very seldom is it possible to render a partial service and achieve a satisfactory solution or have a satisfied client.

He further declares that after twenty-two years he has found no substitute for long hours, hard work and dedicated employees. Operating on a team basis, Butner believes that the contribution of the seasoned draftsman is equally as important to a well-prepared set of contract documents as is that of the architect, associate or principal.

Consultant engineering firms are used for mechanical and electrical



work as well as for structural design. Having used the same consultants for many years, the architects consider them as almost part of the family, since they think as one to form an integral part of the team. They are so close they even argue and react like members of a family and are totally sensitive to each other's input and needs.

Because the profession has been extremely good to him over the years, and remembering the assistance of older practitioners in his early practice, Butner has always felt an obligation to plow time and energy back into the profession which accounts for his many hours of service with AIA at both the state and national levels as well as with the licensing board.

Since the founding of this firm, the design direction has been towards a very personal and client-oriented practice. A small and diversified practice has been intentionally established, with repeat clients accounting for the majority of the firm's current work. From concept to completion of construction, the principal's personal attention to design, good construction practices and economy has been paramount.

1972

The Freeman-White Associates, Inc.
Charlotte, North Carolina

The firm of The Freeman-White Associates, Incorporated, is a continuation of a distinguished architectural/engineering practice organized in Charlotte, North Carolina by the late Charles C. Hook in 1892. Mr. Hook, the only architect in the state of North Carolina at that time, practiced individually until the year 1900, at which time he was joined by Frank McNeil Sawyer, practicing under the name of Hook and Sawyer until 1904. In 1908 Mr. Hook was joined by Willard G. Rogers, practicing under the name of Hook and Rogers.

The partnership of Hook and Rogers was dissolved in 1916, and the late Mr. Hook practiced individually until joined by his son Walter W. Hook in 1923, practicing as Charles C. & Walter W. Hook, Architects.

Mr. Charles C. Hook was the designer of North Carolina's first "skyscraper", namely, the old Academy of Music Building in Charlotte, which was six stories high, and which was destroyed by fire in December 1922. It is said that people traveled from all over this area to Charlotte to see this mammoth architectural achievement. The building housed offices and a theatre which played host to many of the theatrical celebrities of that time such as Joseph Jefferson, Sara Bernhardt, David Warfield, and many other famous actors and actresses.

After the death of Mr. Charles C. Hook in 1938 Mr. Walter W. Hook continued individually until a Corporation was formed in 1946, and in 1956 the name was changed to Walter Hook Associates, Inc.; and the firm still continued a very successful practice.

After the untimely death of Walter M. Hook, FAIA, in September 1963, a smooth transition of leadership was made when Mr. Beverly L. Freeman and Mr. Hugh E. White were named President and Vice President, respectively, of the corporation. The firm

was subsequently changed to The Freeman-White Associates, Inc., and has continued its successful practice.

The eternal question which every professional firm faces concerns its goals—What type of practice do we desire; what special services are we capable of offering; what size staff is required to maintain the desired degree of professional proficiency? Our basic decisions relative to these questions were made some 20 years ago and with periodic updating, are viable guidelines for our present day practice. Our practice has been wide and varied including practically all building types—institutional, educational, commercial, and religious. Of all the building types in which we have had experience, we consider hospitals and allied health facilities to be the most challenging and complex. Through the years we have built our staff upon the premise that we are interested in professionally qualified personnel, whose interest and enthusiasm is devoted to the health care field. It is our belief that a professional who is qualified to cope with the complexities of a large hospital project can also do an excellent service on other architectural building types of less complexity. This philosophy has worked very successfully for this firm.

It became apparent very early that if we were to devote ourselves to complex projects, very precise coordination was required for the architectural and engineering phases. We added to our engineering staff to the degree that now the architectural and engineering staffs are almost equal in size and insure a high degree of coordination and project proficiency. Many years ago we decided that the desirable size for our firm would be approximately 40. This would insure sufficient personnel to handle any size project and yet be able to weather the ups and downs of our profession without engaging in the hiring and firing

technique. Consequently, we have maintained a very stable staff which has only varied from 35 to 45. For the personalized service we wish to give every client, we still believe this is the correct size for our firm.

The comprehensive services offered by our firm are site selection analysis, long-range master planning, project programming, and accurate cost analysis along with the full range of architectural, structural, mechanical, electrical and sanitary services. Because we like to finish what we start, we also have a subsidiary company of interior designers, Omnia Design, Inc., who bring our clients a sensitive understanding of both architectural form and of environmental purpose.

Our in-house organization is not departmentalized, but uses the project team concept. We have at various times used computer services for a job cost, structural analysis and mechanical analysis, but at this time do not have an in-house computer. Our specifications are based upon the AIA MASTERSPEC system in conjunction with an IBM Mag Card II System.

This is a firm profile which has worked very satisfactorily for The Freeman-White Associates, Inc. We realize, however, that every architectural and architectural/engineering firm is an entity of its own and this certainly should not be considered a pattern for guaranteed success.

1973

J. Bertram King, FAIA, Architect
Asheville, North Carolina

The firm of J. Bertram King was established in 1952 as a one-man office. Starting with residential and small commercial work the firm has steadily grown to an office which averages a staff of 8 to 12 persons and remains a sole proprietorship.

The firm is in the fourth location since its inception, and for the past ten years has been situated in a large former dwelling remodeled for office use.

The work load for the past several years has been predominantly educational, medical, commercial, industrial and public housing. During this year projects under construction have included two comprehensive high schools, a medical office building, a residence hall, a university social sciences building, a manufacturing plant, a bank building, and several small office structures totaling over 10.8 million dollars.

Several AIA awards have been received for design including two NCAIA honor awards, two awards of merit from the NCAIA and two from the South Atlantic Region AIA.

With consultants performing all engineering, landscape and interior services it has been possible to maintain a small, efficient staff; and the size of the firm has enabled the principal to keep close contact with the design and development of each project.

Some recent work has been the home office and seven branches for the Bank of Asheville, the Asheville High School Vocational Building, Madison County High School, Reynolds High School, Kanuga Episcopal Conference Center, and the Humanities Building UNC-Asheville.



Photo by Putnam & Brazell Photography

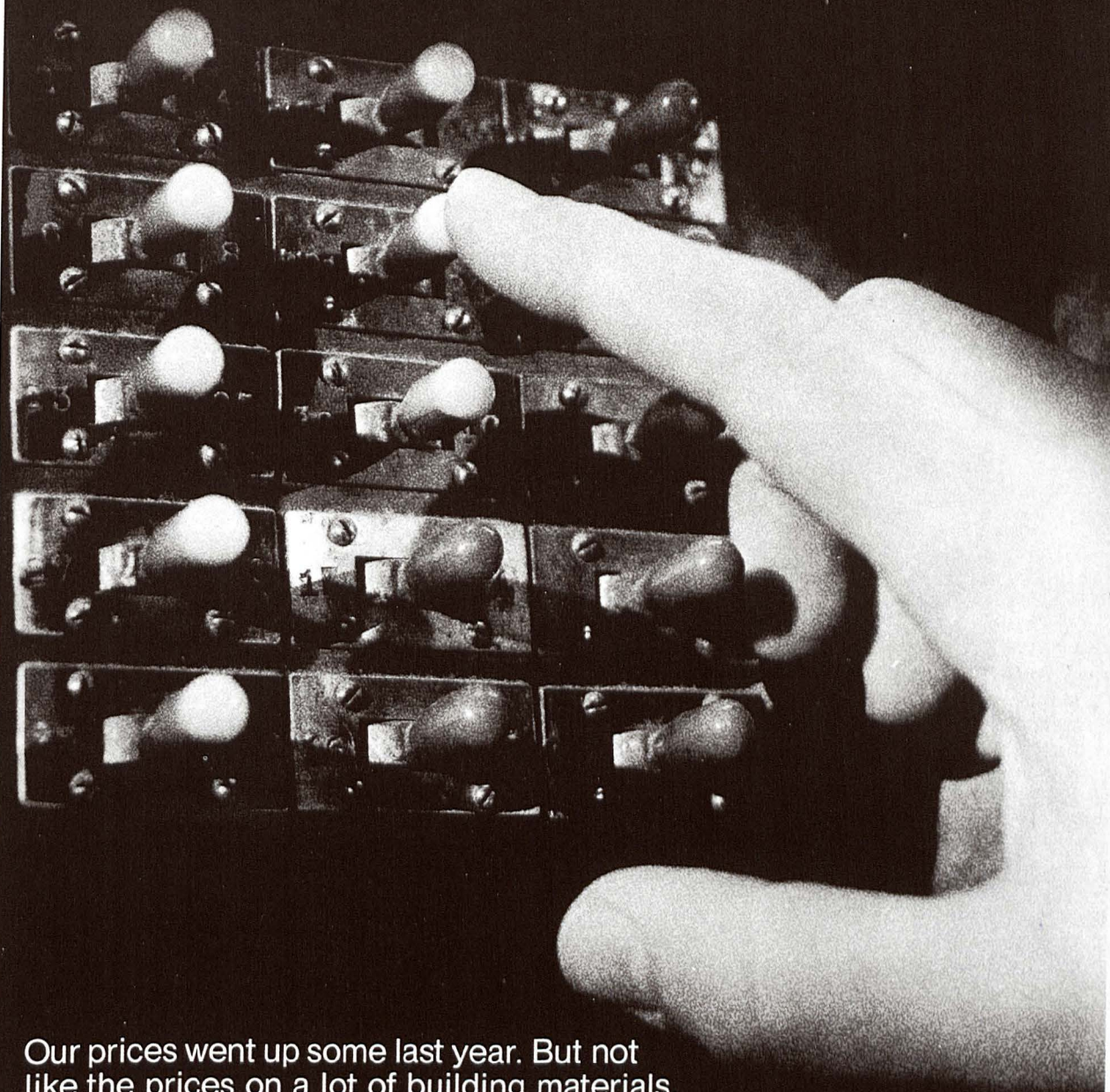
PROGRAM—NCAIA WINTER CONVENTION

Hyatt House & Convention Center
Winston-Salem, N. C.

Thursday, Friday, Saturday
13, 14, 15 February 1975

"This Business of Architecture"

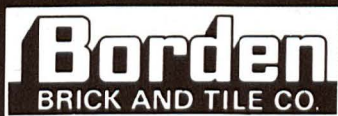
THURSDAY, 13 February	12:00- 6:00 PM	Registration—Galleria—Convention Center
	2:00- 5:00 PM	Board of Directors Meeting—Convention Center
	5:30- 6:30 PM	Opening of Exhibits—Cocktails honoring Exhibitors
	6:30 PM	Buses leave from Convention Center for Schlitz Brewery for Dinner, Dancing
	9:30 PM	Buses return to Hotel
FRIDAY, 14 February	8:30- 9:00 AM	Continental Breakfast—Exhibit Area—Convention Center
	9:00-10:15 AM	Chapter Business Meeting—Convention Center
		Installation of 1975 Officers and Directors
		Legislation Report
		Other Reports
	9:00-12:30 PM	Registration—Galleria—Convention Center
	10:15-10:45 AM	Coffee in Exhibit Area
	10:45-12:00 Noon	"How to Succeed in Business"—NCAIA Players Moderator: S. Scott Ferebee, Jr., FAIA
	12:00-12:30 PM	Bloody Marys in Exhibit Area
	12:30- 2:00 PM	Luncheon at Hyatt House Presiding: Turner G. Williams, AIA Installation of New Members Installation of Claude McKinney Introduction of Board Members & Guests Guest Speaker: Robert F. Clodfelter, Vice-President, Wachovia Bank
	2:00- 6:00 PM	Registration—Galleria—Convention Center
	2:00- 5:00 PM	Buses leave Convention Center for Tour of Reynolda House and Kitchen Decorator Showroom—light refreshments
	2:15- 3:15 PM	Second Professional Session "Know Your Costs": Jack Train "Budget Your Costs": S. Scott Ferebee
	3:15- 3:45 PM	Coffee in Exhibit Area
	3:45- 4:45 PM	Third Professional Session "Control Your Costs": Neil Harper
SATURDAY, 15 February	4:45- 5:30 PM	Visit Exhibits
	6:30- 7:30 PM	President's Reception—Hyatt House—Reception Deck
	7:30- 9:30 PM	Awards Banquet—Hyatt House Ballroom Announcement of Awards Presentation of Past President's Gift
	9:30-12:30 AM	Dancing to the Davis Trio with singer Joyce Hawley—Hyatt House (BYOL)
	8:30- 9:30 AM	Continental Breakfast—Exhibit Area—Convention Center
	9:30-10:00 AM	Drawing for Prizes—Exhibit Area
	10:00-12:00 Noon	Fourth Professional Session Presiding: Michael D. Newman, AIA "Compensation": Panel—Neil Harper, S. Scott Ferebee, Jack Train
	10:00-12:00 Noon	Buses leave from Convention Center for Old Salem Tour
	12:00 Noon	Meeting Adjourns
	12:30 PM	Informal luncheon—Hyatt House—rap with speakers



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Chapter Honors General Assembly

On February 5, the NC Chapter AIA hosted a reception honoring the members of the 1975 North Carolina General Assembly. Chapter headquarters building, The AIA Tower on Morgan Street, Raleigh, was the setting for the early evening affair. Approximately one hundred legislators and their spouses were entertained by the Chapter Board of Directors and the NCAIA Government Relations Committee and their wives. A delicious buffet was served in the Board room and the Executive Director's office.

The AIA Tower is listed on the National Register of Historic Places and is a downtown Raleigh landmark. Originally constructed in 1887 as a support for a tremendous water storage tank for the City of Raleigh, the octagonal tower structure rises some eighty feet from the ground. With the abandonment of the water system and the removal of the tank, the interior space was converted to an architectural office by William H. Deitrick, FAIA, in the 1930's. When Mr. Deitrick retired from active practice, he made the property available to the North Carolina Chapter AIA and they have maintained headquarters there since 1963. General Assembly members were

complimentary of the outstanding historic preservation and adaptive use of the fine old building, and the reception was deemed quite successful. ■

Convention Exhibitors

As of magazine press time the following companies have contracted for booth space at the NCAIA Winter Convention:

Adams Concrete Products Co.
Addressograph-Multigraph Corp.,
Bruning Div.
Amarr Co.
American Olean Tile Co.
Andco Industries Corp.
Arnold Stone Company
Woody Atkins Assocs.
Atlas Supply Company
Bethlehem Steel Corp.
Binning's Inc.
The Bonitz Companies Inc.
Brick Association of NC
D. H. Bruch Marketing
Buckingham-Virginia Slate Corp.
Carolina Solite Corp.

Catch-A-Drip Co.
Celanese Coatings Co.
Cherokee Brick Co. of NC
Cold Spring Granite Co.
Conmat, Inc.
Cunningham Assocs., Inc.
Earle Waterproofing/Pressure Seal
Giant Portland Cement Co.
Gifford-Hill & Co., Inc.
Gulistan Carpet, J. P. Stevens
& Co., Inc.
Homasote Co.
Interior Space Management, Inc.
J & J Industries, Inc.
Libbey-Owens-Ford Co.
Mid-State Tile Co.
Partitions Inc. of the Carolinas
Pella Window & Door Co.
J. E. Pope Co.
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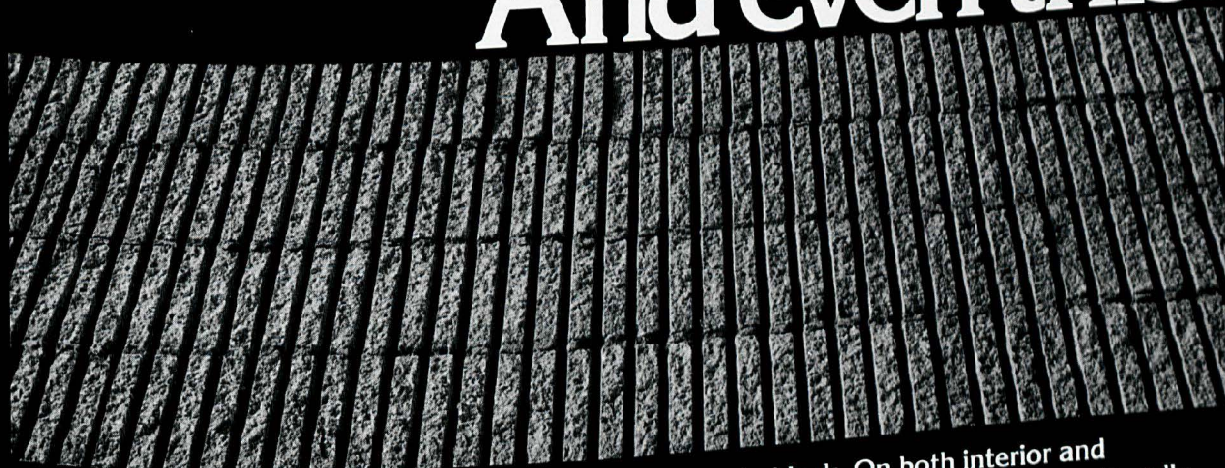
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concrete block. On both interior and exterior walls, concrete block is continually being used in new ways. Look around. See if you can recognize how "Concrete block keeps changing with the times."

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